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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,788	03/26/2001	Darrell L. Sparks	2303-1-015N	7795

7590 08/14/2002

KLAUBER & JACKSON
411 Hackensack Avenue
Hackensack, NJ 07601

EXAMINER

AHMED, SHEEBA

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 08/14/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

mk-4

Office Action Summary

Application No.

09/817,788

Applicant(s)

SPARKS ET AL.

Examiner

Sheeba Ahmed

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

ETAILED ACTION

Claim Objections

1. The numbering of claims is not in accordance with 37 CFR 1.126. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented. In this case, there are two claims numbered 2. Misnumbered claims 2-24 ^{have} been renumbered 3-25.
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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-8, 10-13, 16, 17, 22-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Trabert et al. (US 5,318,737).

Trabert et al. disclose a plastic composite made by feedblock coextrusion (***thus meeting the limitations of claim 25***) of a molten acrylic capstock (***corresponding to the capstock composition layer of the claimed invention***) overlying and bonded to an underlying structural plastic ply (***corresponding to the core layer of the claimed invention***) (Abstract). The thickness of the capstock can be 0.2 to 2.5 mm (***equivalent to 200 to 2500 microns***) and the thickness of the structural plastic ply can be 1.5 to 10mm (***thus meeting the limitations of claims 12 and 13***)(Column 1, lines 38-41). The acrylic capstock composition comprises (A) 40 to 88 wt.% of a copolymer of methyl

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methacrylate and a minor amount of a lower alkyl acrylate having a molecular weight of at least 125,000 Daltons and (B) 12 to 60 weight % of an acrylate-based impact modifier, such as one having a core-shell structure and composed of methyl methacrylate, in the form of discrete particles (***corresponding to the discrete particles of the claimed invention and meeting the limitations of claims 16, 17, 22 and 23***) (Column 4, lines 35-68). The copolymer can comprise 88 to 99.9 wt.% of methyl methacrylate and 0.1 to 12 wt.% of the alkyl acrylate (***thus meeting the limitations of claims 5-7, 10, and 11***) (Column 6, lines 19-22). Examples of the structural plastic ply include polyvinyl chloride, ABS and polycarbonate (Column 5, lines 29-35) and polyethylene, polypropylene, polymethyl methacrylates (***thus meeting the limitations of claim 4***), and polyethylene terephthalates (Column 9, lines 15-57). Fillers may be added to the acrylic composition and do not exceed 15 weight % of the capstock composition and include barium sulfate and calcium carbonate (***alternately, corresponding to the discrete particles of the claimed invention and thus meeting the limitations of claim 24***) (Column 10, lines 44-63). The Examiner takes the position that the refractive index of the discrete particles disclosed by Trabert et al. inherently differs from the refractive index of the disclosed methyl methacrylate-lower alkyl acrylate copolymer given that the index of refraction is a material property and is dependent on the chemical composition of the material and in this case, the two materials (i.e., the particles and the resin) are chemically different. All limitations of the claimed invention are either disclosed or inherent in the above reference.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 9, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trabert et al. (US 5,318,737).

Trabert et al., as discussed above, teach that the acrylic capstock composition provides improved properties, such as chemical resistance, to the underlying plastic layer but do not specifically state that the acrylic capstock maybe applied to both sides of the underlying plastic layer and that the discrete particles in the second layer have a particle size of 1 to 60 microns. However, it would have been obvious to one having ordinary skill in the art to apply the acrylic capstock composition to both sides of the underlying plastic layer to impart improved properties to both sides. For example, Trabert et al. teach that their composite may be used in fencing (Column 10, lines 17-43) and in such a situation improved properties may be needed on both sides of the underlying plastic layer. Furthermore, it would have been obvious to one having ordinary skill in the art to optimize the size of the filler material given that large particle size filler materials results in low, i.e., matte or dull finishes (*as evidenced by Smith, US 3,714,107, who teaches that filler materials such as natural ground barium sulfate or calcium carbonate having a large particle size provide a surface with a dull finish; See Column 2, lines 35-45*).

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4. Claims 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trabert et al. (US 5,318,737) in view of Jacobs et al. (US 6,225,407 B1).

Trabert et al., as discussed above, do not specifically stat that the refractive indices of the methacrylate copolymer and the discrete methacrylate particles are in the range of 1.40 to 1.65 and that the refractive indices of the two components differ by 0.001 to 0.030. However, Jacobs et al. teach that core-shell modifiers having a refractive index of 1.52 to 1.55 are highly desirable to obtain very high transparency in a polymer blend. Hence, it would have been obvious to replace the impact modifier particles disclosed by Trabert et al. with a core-shell modifier having a refractive index of 1.52 to 1.55 given that Jacobs et al. teach that the use of impact modifiers having a refractive index of 1.52 to 1.55 are highly desirable when a transparent resin blend is desired. Furthermore, the Examiner takes the position that the refractive index of the methacrylate copolymer must inherently be in the range of 1.40 to 1.65 given that the copolymer as disclosed by Trabert et al. and that of the claimed invention are identical.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheeba Ahmed whose telephone number is (703)305-0594. The examiner can normally be reached on Mon-Fri 8am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau can be reached on (703)308-2367. The fax phone numbers for the organization where this application or proceeding is assigned are

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(703)305-5408 for regular communications and (703)305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-5665.



Sheeba Ahmed
August 11, 2002



Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700